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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HOLLAR, ANDREA B

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,225

Applicant(s)

KUMAR ET AL.

Examiner

Andrea Hollar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-42 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

ADH

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: page 21, lines 12, 13, and 27 contain the reference number 110A. Reference number 110A does not appear in the drawings.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/087237. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the instant application is broader than claim 1 of 10/087237, and is therefore anticipated by 10/087237. Thus under the doctrine of *In re Goodman*, claim 1 of the instant application is obvious over claim 1 of 10/087237.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10, and 19 recite the limitation "the session data" on lines 10-11, 15-16, and 18-19, respectively. It is unclear whether "the session data" on these lines is referring to "a primary state of session data" or "a client state of the session data". There is insufficient antecedent basis for this limitation in the claim. It is assumed for the purposes of examination that "a primary state of session data" is the intended session data referred to by "the session data".

Statutory Subject Matter

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 35-42 have been considered by the examiner to be statutory under 35 U.S.C. 101 because the claimed invention is directed to an article of manufacture, which is considered in MPEP section 2107.01 to be a statutory category of invention. Additionally, section 2106 states that the recitation of a computer program within an otherwise statutory invention does not render the invention nonstatutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-7, 9-11, 13-16, 18-19, 21-24, 26-27, 29-32, 34-35, 37-40, and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer (5,884,325).

With respect to claim 1, Bauer discloses a system, comprising:

a distributed store comprising a primary state of session data configured for access by a plurality of application servers (col. 1, lines 66-67), wherein the session data comprises a plurality of attributes (col. 2, lines 15-17);

a first one of the application servers comprising a client state of the session data (col. 2, line 9), wherein the application server is configured to provide access to the session data to processes executing within the application server (col. 1, lines 60-62);

wherein the system is configured to:

compare the client state to a benchmark of the client state to determine a subset of the attributes that have been modified in the client state (col. 2, lines 13-15); and

synchronize the primary state with the client state according to the subset of the attributes (col. 2, lines 63-64).

With respect to claim 2, Bauer discloses that the application server is configured to provide access to the session data for one or more client sessions of the system (col. 1, lines 60-62).

With respect to claim 4, Bauer discloses that to compare the client state to a benchmark of the client state, the system is further configured to perform object graph differencing of an object graph representation of the client state and an object graph representation of the benchmark of the client state (col. 2, lines 51-57).

With respect to claim 5, Bauer discloses that the first application server is configured to track accesses of the attributes of the client state (col. 2, lines 8-10), wherein the system is configured to:

compare the tracked accessed attributes to a benchmark of the attributes of the client state to determine a subset of the tracked accessed attributes that have been modified in the client state (col. 2, lines 13-18, 56); and

synchronize the primary state with the client state according to the subset of the tracked accessed attributes (col. 2, lines 63-64).

With respect to claim 6, Bauer discloses that to track accesses of the attributes of the client state, the first application server is further configured to track only mutable attributes (col. 2, lines 10-13).

With respect to claim 7, Bauer discloses that to track accesses of the attributes of the client state, the first application server is further configured to track only mutable accesses of the attributes of the client state, wherein mutable accesses comprise write accesses of any of the attributes of the client state (col. 2, lines 10-13).

With respect to claim 9, Bauer discloses that to compare the tracked accessed attributes to a benchmark of the attributes of the client state, the system is further configured to perform object graph differencing of an object graph representation of the tracked accessed attributes and an object graph representation of the benchmark of the attributes of the client state to locate the modified tracked accessed attributes (col. 2, lines 51-57).

With respect to claim 10, Bauer discloses a system comprising:

a distributed store comprising a primary state of session data configured for access by a plurality of application servers (col. 1, lines 66-67), wherein the session data comprises a plurality of attributes (col. 2, lines 15-17);

a first one of the application servers comprising a client state of the session data (col. 2, line 9), wherein the application server is configured to provide access to the session data to processes executing within the application server (col. 1, lines 60-62);

wherein the system is configured to:

determine a subset of the attributes of the session data that have been modified in the client state (col. 2, lines 13-15);

synchronize the primary state with the client state according the subset of the attributes that have been modified (col. 2, lines 63-64).

With respect to claim 11, Bauer discloses that the application server is configured to provide access to the session data for one or more client sessions of the system (col. 1, lines 60-62).

With respect to claim 13, Bauer discloses that in said determining the subset of the attributes of the session data, the system is further configured to perform object graph differencing of an object graph

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representation of the client state and an object graph representation of the benchmark of the client state (col. 2, lines 51-57).

With respect to claim 14, Bauer discloses that the first application server is configured to track accesses of the attributes of the client state (col. 2, lines 8-10), wherein the system is configured to:

determine a subset of the tracked accessed attributes that have been modified in the client state (col. 2, lines 13-18, 56); and

synchronize the primary state with the client state according to the subset of the tracked accessed attributes (col. 2, lines 63-64).

With respect to claim 15, Bauer discloses that to track accesses of the attributes of the client state, the first application server is further configured to track only mutable attributes (col. 2, lines 10-13).

With respect to claim 16, Bauer discloses that to track accesses of the attributes of the client state, the first application server is further configured to track only mutable accesses of the attributes of the client state, wherein mutable accesses comprise write accesses of any of the attributes of the client state (col. 2, lines 10-13).

With respect to claim 18, Bauer discloses that in said determining the subset of the tracked accessed attributes, the system is further configured to perform object graph differencing of an object graph representation of the tracked accessed attributes and an object graph representation of the benchmark of the attributes of the client state to locate the modified tracked accessed attributes (col. 2, lines 51-57).

With respect to claim 19, Bauer discloses a system, comprising:

a distributed store comprising a primary state of session data configured for access by a plurality of application servers (col. 1, lines 66-67), wherein the session data comprises a plurality of attributes (col. 2, lines 15-17);

a first one of the application servers comprising a client state of the session data (col. 2, line 9), wherein the first application server is configured to provide access to the session data to processes executing within the application server (col. 1, lines 60-62);

means for determining a subset of the attributes of the session data that have been modified in the client state (col. 2, lines 13-15); and

means for synchronize the primary state with the client state according to the subset of the attributes (col. 2, lines 63-64).

With respect to claim 21, Bauer discloses that said means for determining the subset of the attributes of the session data comprises means for performing an object graph differencing of an object graph representation of the client state and an object graph representation of the benchmark of the client state to locate the modified attributes (col. 2, lines 51-57).

With respect to claim 22, Bauer discloses:

means for tracking accesses of the attributes of the client state (col. 2, lines 8-10);

means for determining a subset of the tracked accessed attributes that have been modified in the client state (col. 2, lines 13-18, 56); and

means for synchronizing the primary state with the client state according to the subset of the tracked accessed attributes (col. 2, lines 63-64).

With respect to claim 23, Bauer discloses that means for tracking accesses of the attributes of the client state comprises means for tracking only mutable attributes (col. 2, lines 10-13).

With respect to claim 24, Bauer discloses that means for tracking accesses of the attributes of the client state comprises means for tracking only mutable accesses of the attributes of the client state, wherein mutable accesses comprise write accesses of any of the attributes of the client state (col. 2, lines 10-13).

With respect to claim 26, Bauer discloses that means for determining the subset of the tracked accessed attributes comprises means for performing object graph differencing of an object graph representation of the tracked accessed attributes and an object graph representation of the benchmark of the attributes of the client state to locate the modified tracked accessed attributes (col. 2, lines 51-57).

With respect to claim 27, Bauer discloses a method comprising:

determining a subset of attributes in a client state of session data on a first application server that have been modified (col. 2, lines 13-15), wherein the session data is accessible to one or more processes executing within the application server (col. 1, lines 60-62); and

synchronizing a primary state of session data on a distributed store with the client state according to the subset of the attributes (col. 2, lines 63-64), wherein the primary state is accessible by a plurality of application servers including the first application server (col. 1, lines 66-67).

With respect to claim 29, Bauer discloses that said determining the subset of the attributes of the session data comprises performing an object graph differencing of an object graph representation of the client state and an object graph representation of the benchmark of the client state (col. 2, lines 51-57).

30. The method as recited in claim 27, further comprising:

the first application server tracking accesses of the attributes of the client state (col. 2, lines 8-10);

determining a subset of the tracked accessed attributes that have been modified in the client state (col. 2, lines 13-18, 56); and

synchronizing the primary state with the client state according to the subset of the tracked accessed attributes (col. 2, lines 63-64).

With respect to claim 31, Bauer discloses that tracking accesses of the attributes of the client state comprises tracking only mutable attributes (col. 2, lines 10-13).

With respect to claim 32, Bauer discloses that tracking accesses of the attributes of the client state comprises tracking only mutable accesses of the attributes of the client state, wherein mutable accesses comprise write accesses of any of the attributes of the client state (col. 2, lines 10-13).

With respect to claim 34, Bauer discloses that said determining the subset of the tracked accessed attributes comprises performing an object graph differencing of an object graph representation of the tracked accessed attributes and an object graph representation of the benchmark of the attributes of the client state to locate the modified tracked accessed attributes (col. 2, lines 51-57).

With respect to claim 35, Bauer discloses an article of manufacture comprising software instructions executable to implement:

determining a subset of attributes in a client state of session data on an first application server that have been modified (col. 2, lines 13-15), wherein the session data is accessible to one or more processes executing within the first application server (col. 1, lines 60-62); and

synchronizing a primary state of session data on a distributed store with the client state according to the subset of the attributes (col. 2, lines 63-64), wherein the primary state is accessible by a plurality of application servers including the first application server (col. 1, lines 66-67).

With respect to claim 37, Bauer discloses that said determining the subset of the attributes of the session data comprises performing an object graph differencing of an object graph representation of the client state and an object graph representation of the benchmark of the client state (col. 2, lines 51-57).

With respect to claim 38, Bauer discloses that the software instructions are further executable to:
the first application server tracking accesses of the attributes of the client state (col. 2, lines 8-10);
determining a subset of the tracked accessed attributes that have been modified in the client state (col. 2, lines 13-18, 56); and

synchronizing the primary state with the client state according to the subset of the tracked accessed attributes (col. 2, lines 63-64).

With respect to claim 39, Bauer discloses that tracking accesses of the attributes of the client state comprises tracking only mutable attributes (col. 2, lines 10-13).

With respect to claim 40, Bauer discloses that tracking accesses of the attributes of the client state comprises tracking only mutable accesses of the attributes of the client state, wherein mutable accesses comprise write accesses of any of the attributes of the client state (col. 2, lines 10-13).

With respect to claim 42, Bauer discloses that said determining the subset of the tracked accessed attributes comprises performing an object graph differencing of an object graph representation of the tracked accessed attributes and an object graph representation of the benchmark of the attributes of the client state to locate the modified tracked accessed attributes (col. 2, lines 51-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 8, 12, 17, 20, 25, 28, 33, 36, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer in view of Burns (A Linear Time, Constant Space Differencing Algorithm).

Bauer does not expressly disclose that to compare the client state to a benchmark of the client state, the system is further configured to perform binary differencing of a binary representation of the client state and a binary representation of the benchmark of the client state to locate the modified attributes.

Burns teaches that it is known to use a differencing algorithm that operates on binary representations of two versions of a file to find and output the changes made between the two versions (p. 429, col. 1, lines 25-33).

Bauer and Burns are analogous art because they are both from the same field of endeavor of determining the differences between two sets of data.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to use Burns' differencing algorithm to determine the differences in the client data and the before-image of the client data in Bauer's invention because Burns' differencing algorithm is efficient and can handle large files with linear runtime performance (p. 429, col. 1, lines 9-17).

Therefore it would have been obvious to combine Burns with Bauer for the benefit of efficiently handling large files to obtain the invention as specified in claims 3, 8, 12, 17, 20, 25, 28, 33, 36, and 41.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea Hollar whose telephone number is 571-272-5862. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 571-272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ABH

Debra L. Smith
Primary Examiner